Stormwater and Green Infrastructure Program

CSO Monitoring

Temboo and the District continued its partnership on this project and made two site visits to the RETI Center's barge. The District purchased new sensors to replace the stolen ones from the Flushing Creek, and developed plans for the equipment floatation rig. RETI Center is on board to partner on this project and will allow us the use of their barge and boat to deploy the sensors. The conductivity and turbidity sensor will be deployed in 2024.

John McLaughlin from NYC Department of Environmental Protection describing the marsh and upland restoration project at Paerdegat Bay Ecology Park.

GI Bus Tour

In 2023 the tour took a slightly different approach and featured subsurface detention tanks under tennis courts in a NYC park and porous pavements in a NYC Housing Authority (NYCHA) campus. These are NYC Dept of Environmental Protection projects in partnership with NYC Parks and NYCHA to take advantage of capital improvement projects to integrate on-site stormwater management. We also visited a FloodNet flood sensor site in Brownsville. These are low cost real time sensors that monitor water levels when the streets are flooded. The last stop was the Paerdegat Basin Ecology Park, a restored salt marsh with upland forest. A snowy egret joined the group as we walked the path that meanders through this peaceful park.

Stormwater Infrastructure Matters Coalition

The District assisted the Coalition and Pratt Institute in hosting the State of Water 2-day virtual symposium. The District staff presented on the water rate structure and opportunities for incentivizing green infrastructure on private properties.

The District continued to serve on the Steering Committee and assisted with the Water Quality 101 workshop for community based organizations.

Green Infrastructure Outreach & Education in the Bronx

The District was awarded a grant from the NYS Pollution Prevention Institute to conduct outreach and education in 5 community districts in the Bronx. The goal of the project is to increase awareness of laws, regulations and incentives for green infrastructure on private properties. The project is conducted in partnership with the NYC Department of Education, Bronx Council for Environmental Quality and Green Roof Research Alliance. The project team presented at committee meetings of 4 community boards and distributed information (fact sheets and a summary of regulations and incentives) to community based organizations and at public events. Door hangers on yard planting requirements were printed and 350 door hangers were distributed in the Soundview neighborhood.

New York New Jersey Harbor & Estuary Program

Shino continued to work closely with the Citizens Advisory Committee (CAC) leadership team and served as NY Co-Chair of the Water Quality Working Group. Shino also participates in the HEP CAC Diversity, Equity, Inclusion and Justice Subcommittee and the Harbor Educators Group and led a workshop on power dynamics at the DEI Summit in June.

Other Partnerships

The District continued its participation on the Technical Advisory Committee of the Hudson River Park Trust, the Hudson River Estuary Management Advisory Committee and the Forest for All NYC urban forestry coalition. Even though the Lower Hudson Coalition of Conservation Districts decided to meet only once a year (or as needed), the District continued to serve in the leadership role, communicating with members, planning the annual meeting, facilitating the meeting and inviting guest speakers to the meeting.

Education Program

Envirothon

The District was delighted to resume the NYC Envirothon in 2023! The event was held on April 28th on Pier 84 in the Hudson River Park. Eleven teams from 6 schools competed. The District partnered with the Hudson River Park, NYC Parks – Urban Park Rangers, NYS Dept of Environmental Conservation, NYC Law Department, City Parks Foundation, and USDA-Natural Resources Conservation Service. Winning teams from Manhattan, Brooklyn and Staten Island were also able to compete at the NYS Envirothon in May.

NYC Outdoors Environmental Education Expo

After a hiatus and an attempt at a virtual Expo, the NYC Outdoors Environmental Education Expo was brought back as an in-person event. The event was held at Pier 57 in the Hudson River Park and drew more than 30 organizations that offer environmental education programming to K – 12 schools in NYC.

Many returning exhibitors were delighted to reconnect with their colleagues in the field. The event also drew a handful of new organizations which had never exhibited before, introducing new people to the network.

The venue presented some challenges (it is not as large as our previous venue at NYU) but the organizing team was happy to have the event back on the Hudson River, just as how it started 20 years ago.

Working with Schools and Partners

The District continued to respond to requests for guest lectures. In 2023, we taught 7th grade classes at Brooklyn Green School and a group of high school students from Brooklyn Technical High School. The District also participated in the Billion Oyster Project Symposium.

Urban Soils Institute

8th Annual Urban Soils Symposium

The Annual Symposium is a platform that brings together soils, our common resource, with people of all backgrounds, into a common space for holistic inquiry, knowledge sharing, and cross disciplinary explorations, to better understand and develop/co-create sustainable solutions to optimize the quality of life for all beings.

Our theme in 2023 continued the exploration of the social, infrastructure and bio-geo-chemical metabolic processes and the opportunities for metabolism repair for sustainable development and recovery of quality of life. Through the sub-themes: “Take Care of your own $hit” and “The Clay Exchange.” We enticed and interwove diverse perspectives, approaches, and knowledges in culture and science that really provoked and challenged our understanding of the human-built systems and our raw interconnection and reliance on nature-based

solutions, of which our ignorance underlies the linear consumer-waste-driven society, perpetuating the unsustainable practices that compromise human and environmental health. The power of soils and their complex interconnected development factors encouraged positive realization in the realistic solutions for "metabolism repair" of our systems. Thus, the *Take Care Series* was launched as a mode for furthering the explorations and developing them into activated solutions for metabolism repair by offering collaborative thinking groups to host and co-host this series following the symposium. This *Take Care Series* was well received and people are already offering and suggesting various events, working groups and project proposals.

The symposium was held both in-person (3-days) and virtual (2-days). Participants and contributors were of diverse backgrounds and knowledge bases, representing sectors such as government, academia, industry, not-for-profits, community organizations, and the arts. Presentations were unconventional in format, often featuring many media formats with a focus on audience interaction. Various forms of art, culture, and science were presented and exhibited. Breakout sessions offered hands-on soils, clays, and microbial remediation exchanges and potentials, creating an open floor for technical, colloquial, and artistic inquiry. Open discussions allowed all participants to voluntarily share and debate. Good food and happy hours allowed for networking. The third day of the in-person symposium offered an open-house style workshop and discussion opportunities in our informal setting at the Art Extension Service residency: SWALE house on Governors Island. Here people were able to discuss in a more intimate setting, and deliberate on the symposiums topics further.

Symposium attendees listening to Marina "heron" Tsaplina presenting on her performance art project titled Animate Soils.

The in-person event was hosted by NYC SWCD-NYC USI, and co-hosted with SWALE, RUDN, Institute for Public Architecture, and the Lower Manhattan Cultural Council (LMCC) at LMCC on Governors Island. There were approximately 95 persons in attendance both days, and 35 people on the 3rd (workshop) day. There were 26 presenters across the three in-person days, including 12 interactive exhibits, and five workshop/break-out sessions.

The virtual event hosted contributors and audiences from around the globe, with 18 presenters and approximately 160 attendees across two days. With each year, more requests have been made for YouTube videos of the symposium. Our channel has become especially popular this year, out of interest in the topics and speakers, but also because it has now gained popularity as a known source of educational resources that we offer.

Soils Testing Services and Workshops

The USI resumed soil testing services in 2023 hosting monthly outdoor public soil testing events from April to October on Governors Island and other community locations. These events are coupled with workshops, creating access for the public to gain an understanding of soils and their capacities in various applications, as well as helping the participants understand the results and the best management practices.

The USI also partnered with the Newburgh Urban Farm and Food Initiative (NUFFI) to provide assistance with soils testing, site assessment and soils remediation strategies at a public event in Newburgh attended by more than 1,000 people. The USI is conducting a study on the effectiveness of current remediation strategies at the Downing Park Urban Farm in Newburgh with the end goal of growing high-yield crops in a safe, contaminant-free setting and scaling these methods to other sites in Newburgh.

The USI continued its partnership with Earth Matter in their Compost Soil Testing Apprenticeship Program to provide one session of Soil Basics, Contamination & Microscope Workshop for their students. We also offered soil testing to the public after the workshop.

The USI worked with the Brooklyn Queens Land Trust (BQLT) to facilitate 2 workshops for high school students from a public high school in Brooklyn.

The USI is involved in Citizen Science Microbial Study, which aims to create a deeper understanding of the microbes in contaminated soils, and to begin to identify patterns that may reveal microbes and traits found in certain soils conditions favoring remediation of certain metals.

Soils Laboratory Internship Program

The District executed an agreement with the Medgar Evers College (MEC) of CUNY to begin a soils laboratory internship program. MEC is a predominantly BIPOC college offering an undergraduate degree program in environmental sciences. The District retained an instructor with experience working with urban soils in NYC and recruited two undergraduate students as interns to work in the laboratory.

Students learned the basics of soils, characteristics of soils in urban environments, and how to test soil samples for NPK, bulk density, organic matter, and heavy metals (using pXRF).

NY Botanical Garden Event

George gave a talk at the EcoFlora Event hosted by the New York Botanical Garden. The talk explored the characteristics of urban soils, some of the issues and challenges in sustainable use, and the connections between “urban soils” and the many “ecosystem services” we rely upon every day.

Urban Agriculture

The District continued its participation in the NYS Department of Agriculture & Market’s Diversity & Racial Equity Network. The District also attended a meeting of the USDA - Farm Service Agency Urban County Committee meeting and remains in communication with the NYC County Executive Director.